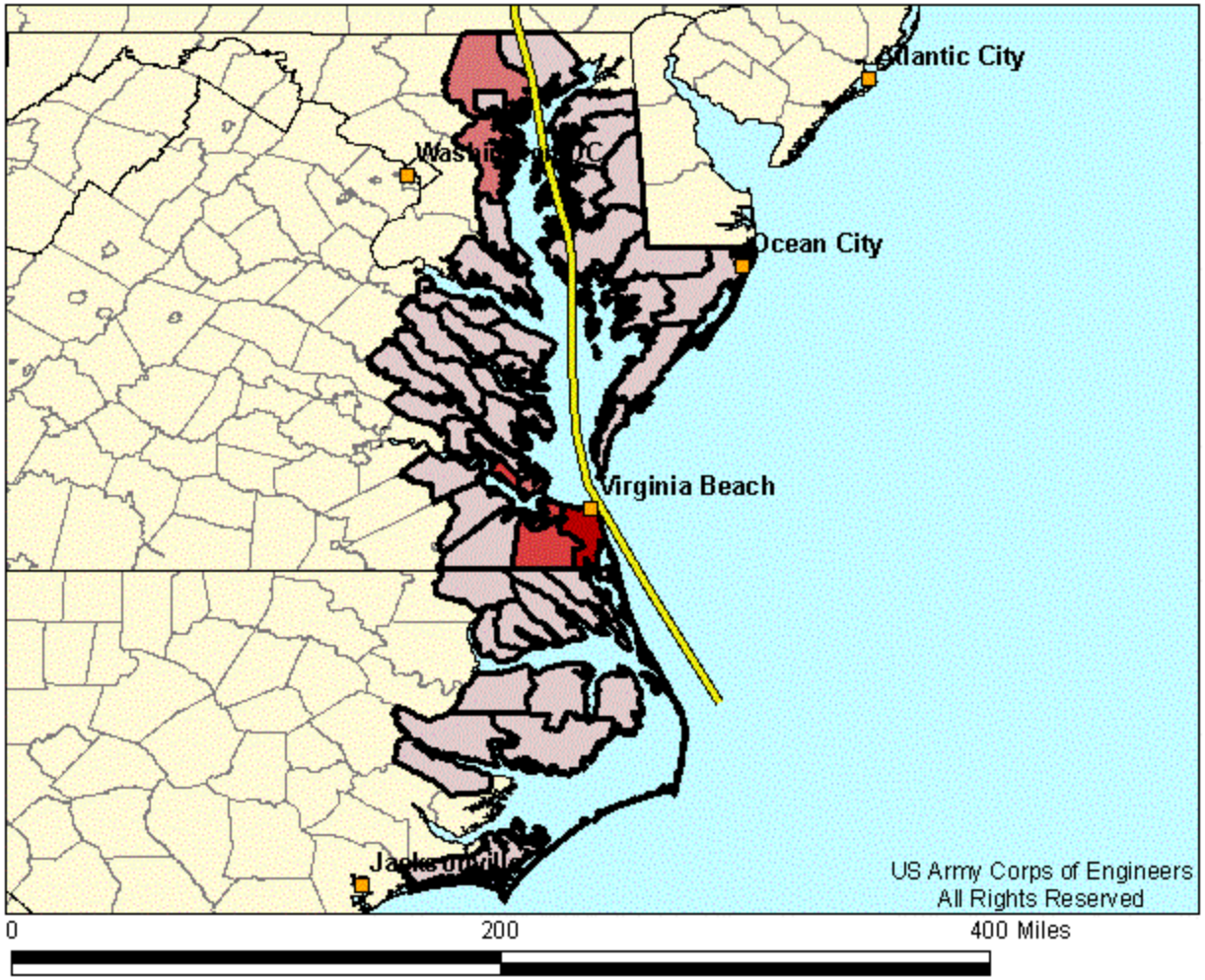
US Army Corps of Engineers

Hurricane MD#3 Debris Model

Landfall Plus About **12** Hours

For Planning Purposes Only!



Post Landfall Debris Model Results

Virginia - 4,912,000 Yards
Maryland - 1,016,000 Yards
North Carolina - 334,000 Yards

Model results per County on following page

This model is based on a Category 2 storm making landfall near Hoopersville, MD.

Historic Track

Debris

- < 100,000 cubic yards
- 100,000 - 249,999 cubic yards
- 250,000 - 499,999 cubic yards
- 500,000 - 999,999 cubic yards
- >1,000,000 cubic yards

Information provided on this page displays a Category 2 storm making landfall near Hoopersville, MD. These projections are based on information from the NHC (1030 EDT 05/16/2008) forecast. The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane MD#3 Debris Model

Generated By:
Siemsen, LRL 1100 EDT 05/16/2008

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane MD#3 Debris Model

Landfall Plus About 12 Hours

For Planning Purposes Only!

State	Yards per State	County	Yards per County
Maryland		Anne Arundel	328,000
		Baltimore	256,000
		Baltimore City	< 1,000
		Calvert	86,000
		Caroline	< 1,000
		Dorchester	35,000
		Harford	87,000
		Kent	7,000
		Queen Anne's	33,000
		Somerset	29,000
		St Mary's	84,000
		Talbot	46,000
		Wicomico	9,000
		Worcester	16,000
Maryland	1,016,000		
North Carolina		Beaufort	< 1,000
		Camden	24,000
		Carteret	< 1,000
		Chowan	14,000
		Currituck	62,000
		Dare	93,000
		Gates	10,000
		Hyde	14,000
		Pasquotank	80,000
		Perquimans	18,000
		Tyrrell	11,000
		Washington	8,000
North Carolina	334,000		
Virginia		Accomack	76,000

State	Yards per State	County	Yards per County
Virginia		Chesapeake city	507,000
(continued)		Essex	2,000
		Gloucester	54,000
		Hampton City	369,000
		Isle Of Wight	32,000
		James City	57,000
		King And Queen	6,000
		King William	3,000
		Lancaster	27,000
		Mathews	27,000
		Middlesex	22,000
		New Kent	< 1,000
		Newport News city	709,000
		Norfolk City	623,000
		Northampton	36,000
		Northumberland	32,000
		Poquoson City	29,000
		Portsmouth city	285,000
		Richmond	7,000
		Suffolk City	93,000
		Surry	3,000
		Virginia Beach city	1,803,000
		Westmoreland	8,000
		Williamsburg city	14,000
		York	88,000
Virginia	4,912,000		

The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Source: US Army Corps of Engineers, All Rights Reserved

Hurricane MD#3 Debris Model

Generated By:
Siemsen, LRL 1100 EDT 05/16/2008

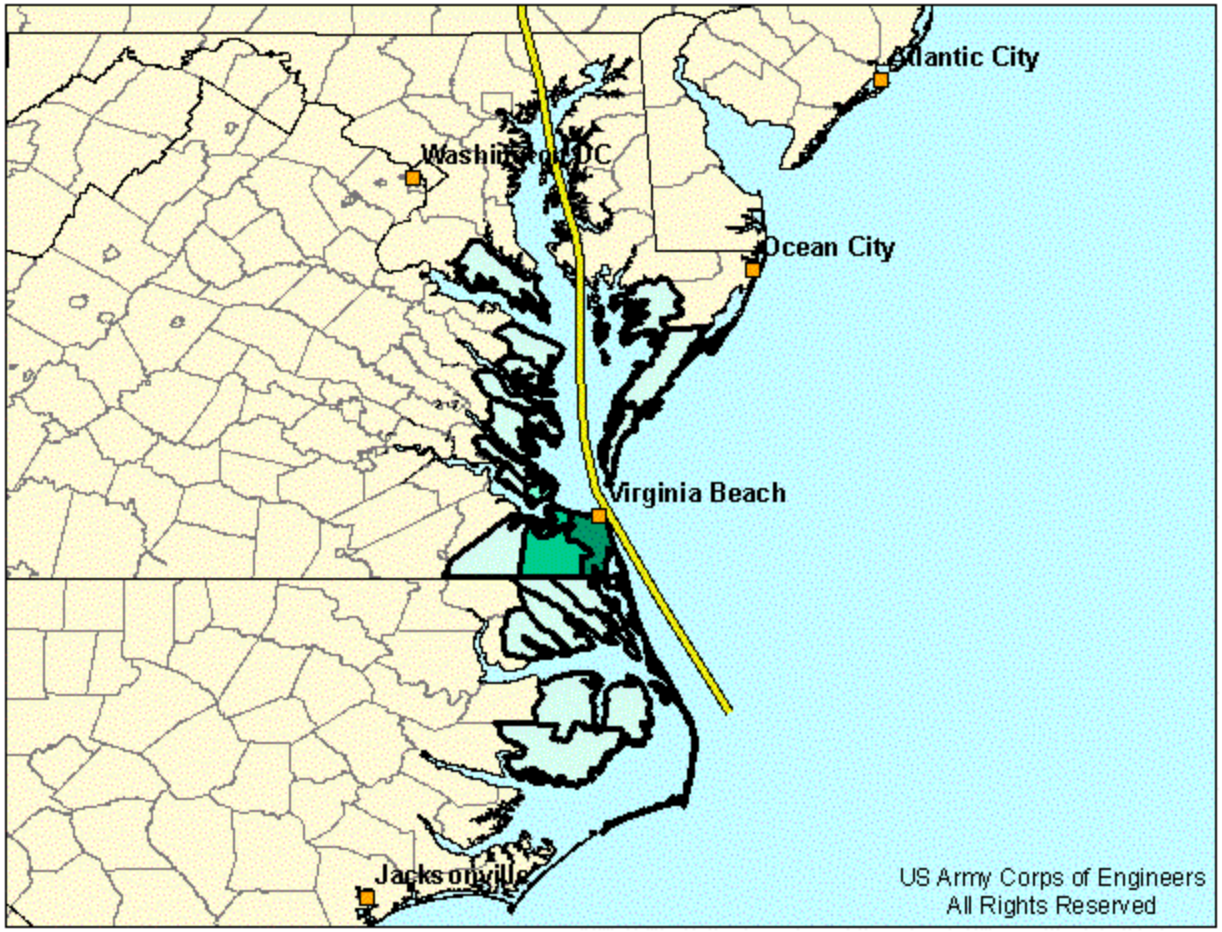
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane MD#3 Commodities Model

Landfall Plus About **12** Hours

For Planning Purposes Only!



Post Landfall Water Model Results

Day One / Day Two / Day Three
VA – 23/45/90 Truckloads
NC – 3/6/11 Truckloads
MD – 1/2/2 Truckloads

Model results per County on following page

This model is based on a Category 2 storm making landfall near Hoopersville, MD.

Historic Track

Commodities

- < 5 Trucks Each
- 5 - 10 Trucks Each
- 11 - 20 Trucks Each
- 21 - 40 Trucks Each
- > 40 Trucks Each

Information provided on this page displays a Category 2 storm making landfall near Hoopersville, MD. These projections are based on information from the NHC ***(1030 EDT 05/16/2008)*** forecast. The amount of commodities forecasted is based on Mission Guide Book requirements and SME input. The graphic represents single day needs with full distribution system in place and operating.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane MD#3 Commodities Model	
Generated By: Siemsen, LRL 1100 EDT 05/16/2008	
Sources: HURREVAC LRL-DEBRIS	Page 3 of 12

US Army Corps of Engineers

Hurricane MD#3 Commodities Model

Landfall Plus About 12 Hours

For Planning Purposes Only!

State	Truckloads per State	County	Truckloads per County
Maryland		Somerset	1
		St Mary's	1
Maryland	2		
North Carolina		Camden	1
		Currituck	2
		Dare	3
		Hyde	1
		Pasquotank	2
		Perquimans	1
		Tyrrell	1
North Carolina	11		
Virginia		Accomack	2
		Chesapeake city	15
		Gloucester	1
		Hampton City	9
		Lancaster	1
		Mathews	1
		Middlesex	1
		Newport News city	2
		Norfolk City	16
		Northampton	1
		Northumberland	1
		Poquoson City	1
		Portsmouth city	7
		Suffolk City	1
		Virginia Beach city	30
		York	1
Virginia	90		

The amount of commodities forecasted is based on Mission Guide Book requirements and SME input and the above table indicates suggested needs based on phased deployment of a commodities distribution system.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Source: US Army Corps of Engineers, All Rights Reserved

Hurricane MD#3 Commodities Model

Generated By:
Siemsen, LRL 1100 EDT 05/16/2008

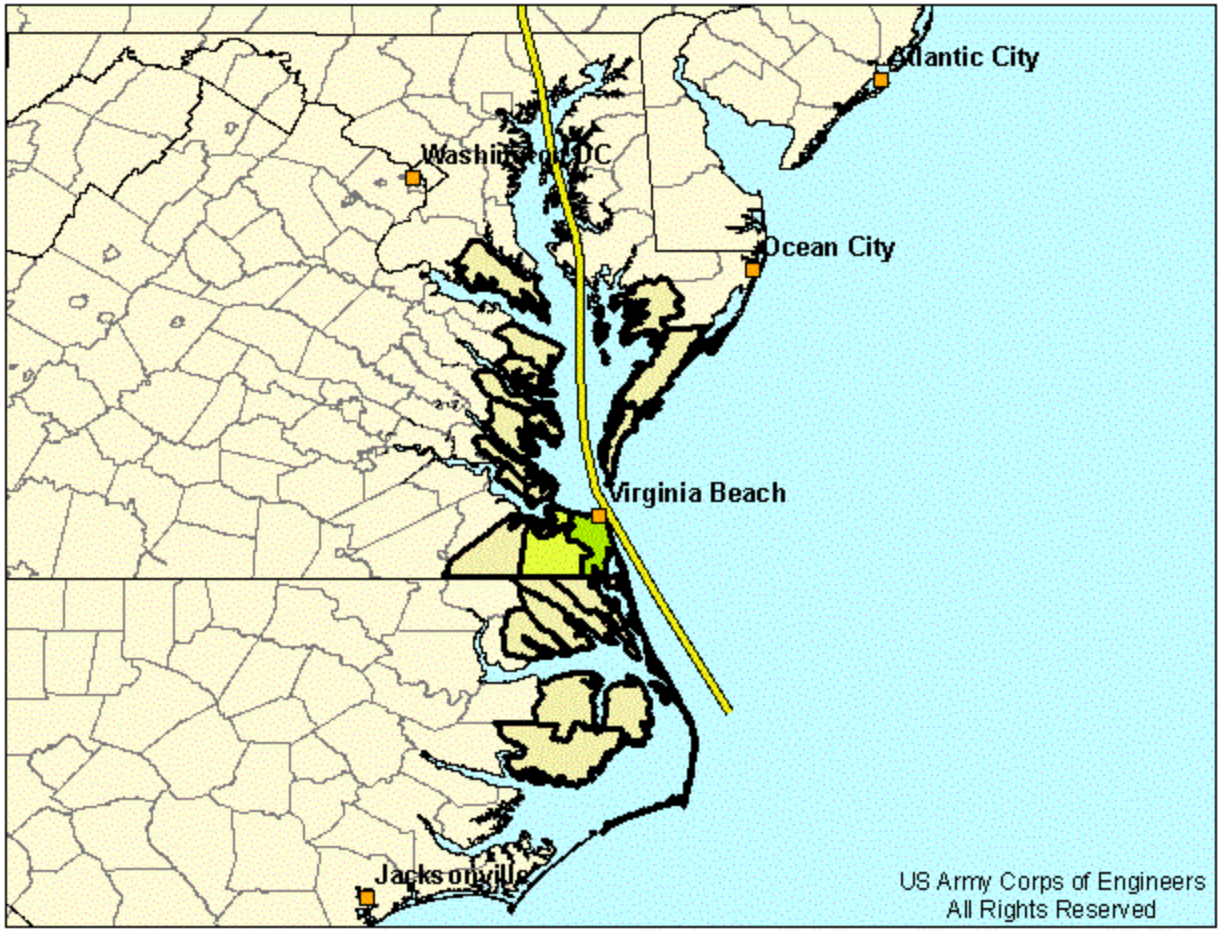
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane MD#3 Temporary Roofing Model

Landfall Plus About 12 Hours

For Planning Purposes Only!



Post Landfall Temporary Roofing Model Results

Virginia - 15,400
North Carolina - 1,100

Model results per County on following page

This model is based on a Category 2 storm making landfall near Hoopersville, MD.

Historic Track

Temporary Roofing

- < 2,000 units
- 2,000 - 3,999 units
- 4,000 - 5,999 units
- 6,000 - 9,999 units
- > 10,000 units

Information provided on this page displays a Category 2 storm making landfall near Hoopersville, MD. These projections are based on information from the NHC (1030 EDT 05/16/2008) forecast. Temporary roofing is based on 3% in CAT 1 and 6% in CAT 2.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane MD#3 Roofing Model	
Generated By: Siemsen, LRL 1100 EDT 05/16/2008	
Sources: HURREVAC LRL-DEBRIS	Page 5 of 12

US Army Corps of Engineers

Hurricane MD#3 Temporary Roofing Model

Landfall Plus About 12 Hours

For Planning Purposes Only!

State	House Units per State	County	House Units per County
Maryland		Somerset	< 100
		St Mary's	< 100
Maryland			
North Carolina		Camden	< 100
		Currituck	300
		Dare	500
		Hyde	< 100
		Pasquotank	300
		Perquimans	< 100
		Tyrrell	< 100
North Carolina	1,100		
Virginia		Accomack	300
		Chesapeake city	2,300
		Gloucester	< 100
		Hampton City	1,500
		Lancaster	200
		Mathews	200
		Middlesex	< 100
		Newport News city	400
		Norfolk City	2,600
		Northampton	200
		Northumberland	200
		Poquoson City	200
		Portsmouth city	1,200
		Suffolk City	< 100
		Virginia Beach city	5,900
		York	200
Virginia	15,400		

Temporary roofing is based on 3% in CAT 1 and 6% in CAT 2.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Source: US Army Corps of Engineers, All Rights Reserved

Hurricane MD#3 Roofing Model

Generated By:
Siemsen, LRL 1100 EDT 05/16/2008

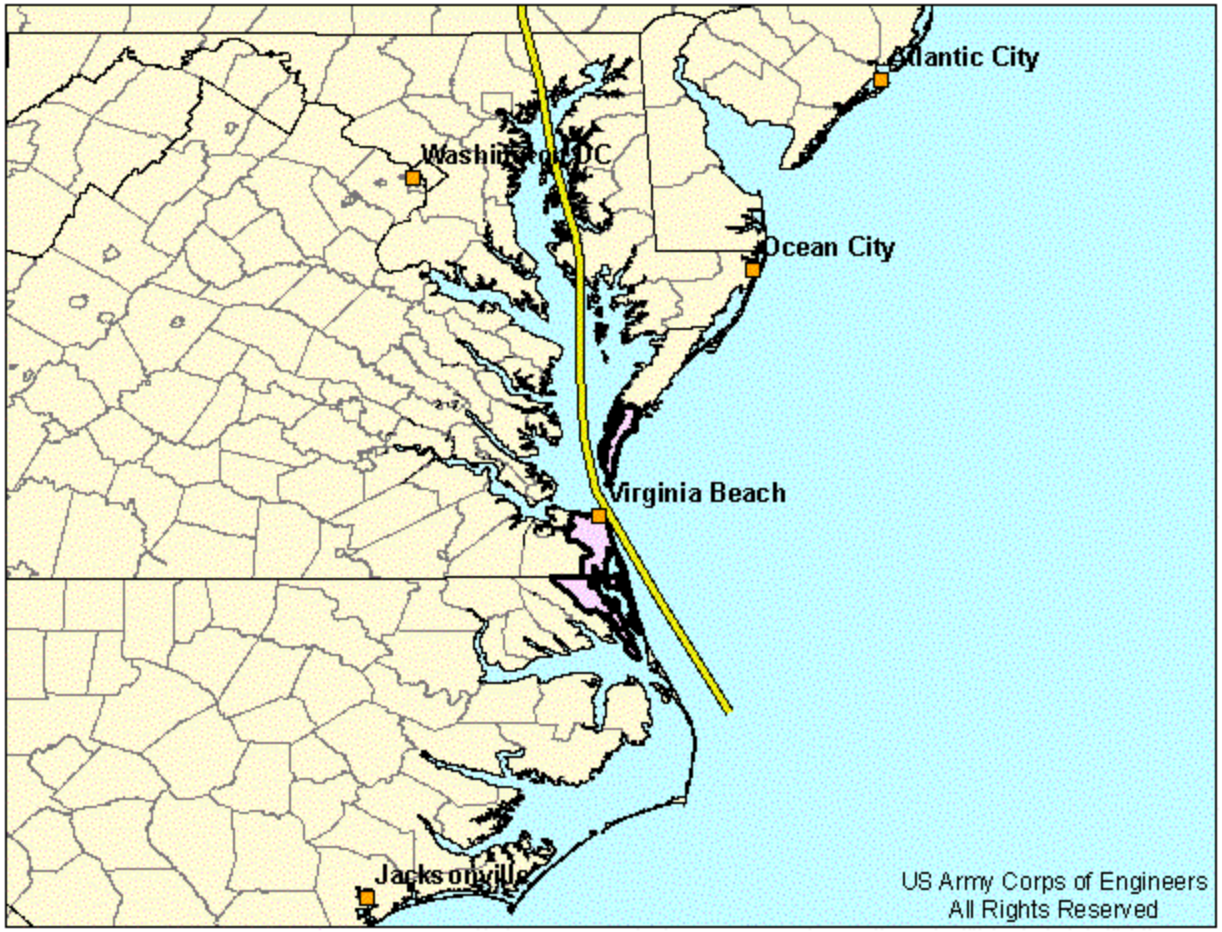
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane MD#3 Temporary Housing Model

Landfall Plus About 12 Hours

For Planning Purposes Only!



Post Landfall Temporary Housing Model Results

Virginia - 400

Model results per County on following page

This model is based on a Category 2 storm making landfall near Hoopersville, MD.

Historic Track

Temporary Housing

- < 2,000 units
- 2,000 - 3,999 units
- 4,000 - 5,999 units
- 6,000 - 9,999 units
- > 10,000 units

Information provided on this page displays a Category 2 storm making landfall near Hoopersville, MD. These projections are based on information from the NHC (1030 EDT 05/16/2008) forecast. Temporary housing is based on 1% in CAT 2.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane MD#3 Housing Model	
Generated By: Siemsen, LRL 1100 EDT 05/16/2008	
Sources: HURREVAC LRL-DEBRIS	Page 7 of 12

US Army Corps of Engineers

Hurricane MD#3 Temporary Housing Model

Landfall Plus About 12 Hours

For Planning Purposes Only!

State	House Units per State	County	House Units per County
North Carolina		Currituck	< 100
North Carolina			
Virginia		Northampton	< 100
		Virginia Beach city	400
Virginia	400		

Temporary housing is based on 1% in CAT 2.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Source: US Army Corps of Engineers, All Rights Reserved

Hurricane MD#3 Housing Model

Generated By:
Siemsen, LRL 1100 EDT 05/16/2008

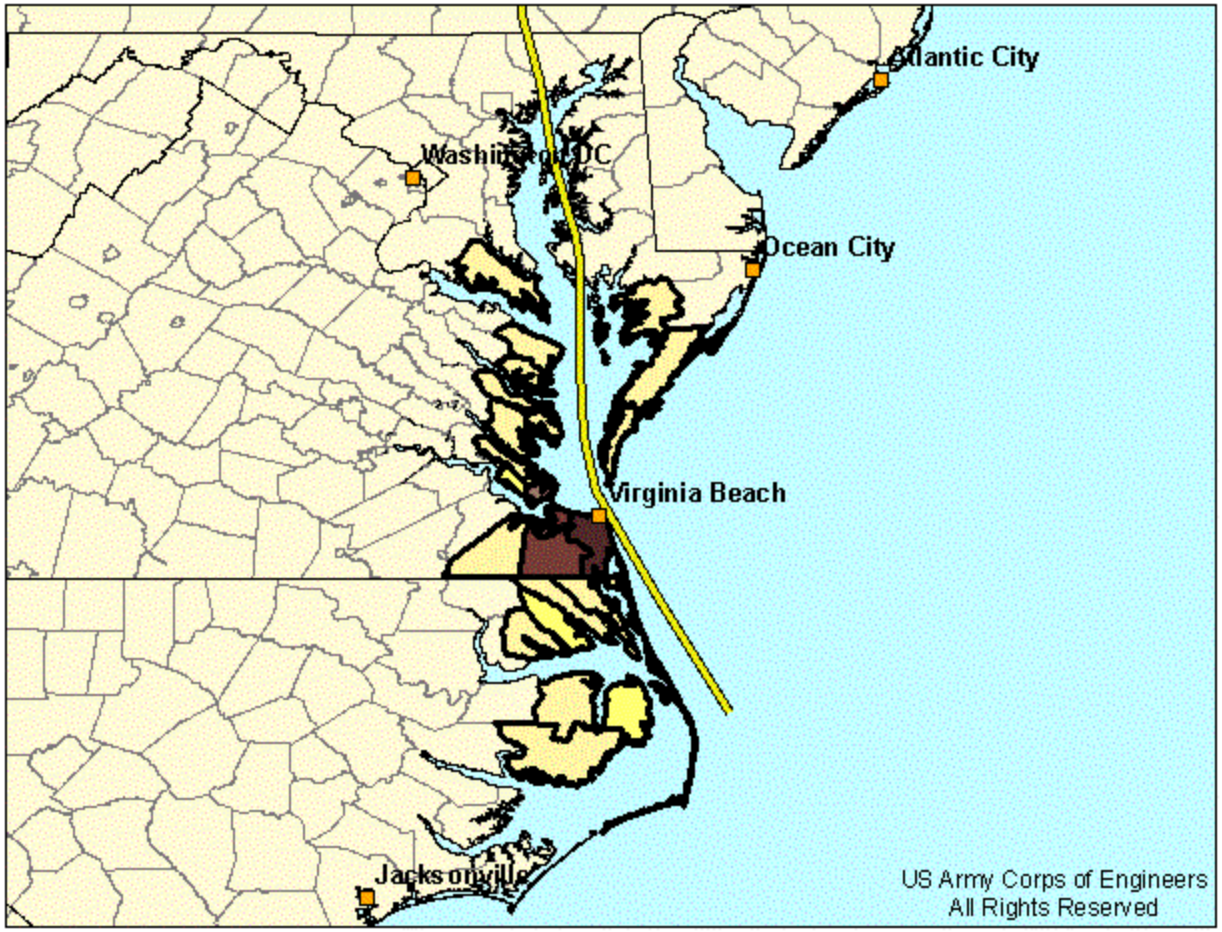
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane MD#3 Population Model

Landfall Plus About 12 Hours

For Planning Purposes Only!



Post Landfall Population Model Results

Virginia - 1,240,000
North Carolina - 92,000
Maryland - 3,000

Model results per County on following page

This model is based on a Category 2 storm making landfall near Hoopersville, MD.

Historic Track

Population

- < 25,000 persons
- 25,000 - 99,999 persons
- 100,000 - 174,999 persons
- 175,000 - 249,999 persons
- > 250,000 persons

Information provided on this page displays a Category 2 storm making landfall near Hoopersville, MD. These projections are based on information from the NHC (1030 EDT 05/16/2008) forecast. The numbers of persons included in this model output are those that would be included within estimated hurricane force winds (Census 2000 values adjusted to July 2006 values).

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane MD#3 Population Model	
Generated By: Siemsen, LRL 1100 EDT 05/16/2008	
Sources: HURREVAC LRL-DEBRIS	Page 9 of 12

US Army Corps of Engineers

Hurricane MD#3 Population Model

Landfall Plus About 12 Hours

For Planning Purposes Only!

State	Population per State	County	Population per County
Maryland		Somerset	< 1,000
		St Mary's	3,000
Maryland	3,000		
North Carolina		Camden	8,000
		Currituck	24,000
		Dare	34,000
		Hyde	< 1,000
		Pasquotank	26,000
		Perquimans	< 1,000
		Tyrrell	< 1,000
North Carolina	92,000		
Virginia		Accomack	19,000
		Chesapeake city	211,000
		Gloucester	5,000
		Hampton City	132,000
		Lancaster	8,000
		Mathews	10,000
		Middlesex	5,000
		Newport News city	28,000
		Norfolk City	229,000
		Northampton	14,000
		Northumberland	8,000
		Poquoson City	12,000
		Portsmouth city	102,000
		Suffolk City	6,000
		Virginia Beach city	436,000
		York	15,000
Virginia	1,240,000		

The number of persons estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2006 values.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Source: US Army Corps of Engineers, All Rights Reserved

Hurricane MD#3 Population Model

Generated By:
Siemsen, LRL 1100 EDT 05/16/2008

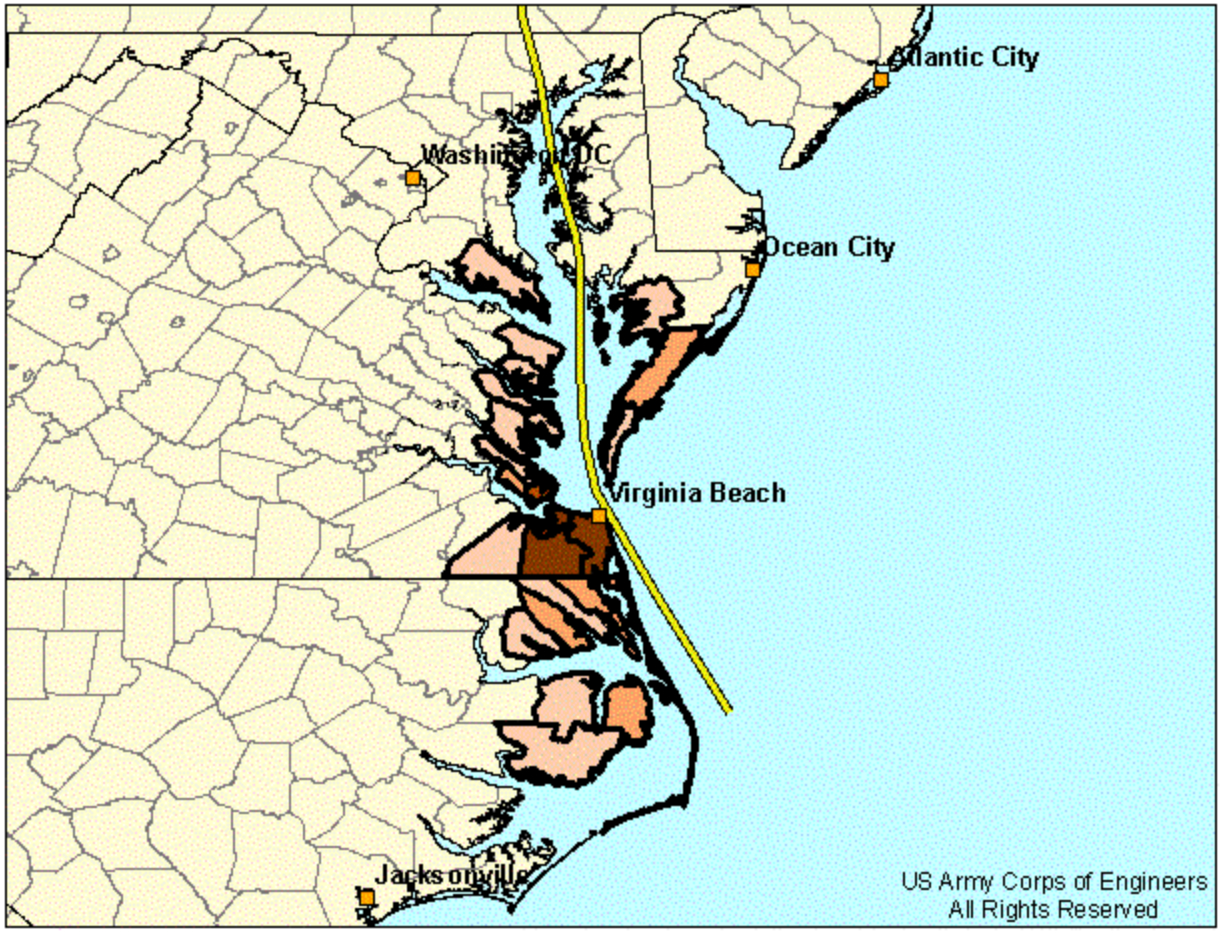
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane MD#3 Households Model

Landfall Plus About 12 Hours

For Planning Purposes Only!



Post Landfall Households Model Results

Virginia - 459,000
North Carolina - 38,000

Model results per County on following page

This model is based on a Category 2 storm making landfall near Hoopersville, MD.

Historic Track

Households

- < 7,500 households
- 7,500 - 14,999 households
- 15,000 - 24,999 households
- 25,000 - 49,999 households
- > 50000 households

Information provided on this page displays a Category 2 storm making landfall near Hoopersville, MD. These projections are based on information from the NHC (1030 EDT 05/16/2008) forecast. The numbers of households included in this model output are those that would be included within estimated hurrican e force winds (Census 2000 values adjusted to July 2006 values).

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane MD#3 Households Model	
Generated By: Siemsen, LRL 1100 EDT 05/16/2008	
Sources: HURREVAC LRL-DEBRIS	Page 11 of 12

US Army Corps of Engineers

Hurricane MD#3 Households Model

Landfall Plus About 12 Hours

For Planning Purposes Only!

State	Households per State	County	Households per County
Maryland		Somerset	< 1,000
		St Mary's	< 1,000
Maryland			
North Carolina		Camden	3,000
		Currituck	10,000
		Dare	15,000
		Hyde	< 1,000
		Pasquotank	10,000
		Perquimans	< 1,000
		Tyrrell	< 1,000
North Carolina	38,000		
Virginia		Accomack	8,000
		Chesapeake city	74,000
		Gloucester	2,000
		Hampton City	49,000
		Lancaster	4,000
		Mathews	4,000
		Middlesex	2,000
		Newport News city	11,000
		Norfolk City	85,000
		Northampton	6,000
		Northumberland	4,000
		Poquoson City	5,000
		Portsmouth city	39,000
		Suffolk City	2,000
		Virginia Beach city	159,000
		York	5,000
Virginia	459,000		

The number of households estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2006 values.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Source: US Army Corps of Engineers, All Rights Reserved

Hurricane MD#3 Households Model

Generated By:
Siemsen, LRL 1100 EDT 05/16/2008

Sources:
HURREVAC
LRL-DEBRIS